

GEOKINETICS INC.

minerals exploration and development

288 buchanan field road • concord, california 94520 • telephone (415) 689-4461

correct copy

BEFORE THE BOARD OF OIL, GAS AND MINING,
DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
IN AND FOR THE STATE OF UTAH

GEOKINETICS INC.
NOTICE OF INTENTION TO COMMENCE
*MINING OPERATIONS IN THE NE¼ OF
SECTION 2 RANGE 22 EAST
TOWNSHIP 14 SOUTH
UINTAH COUNTY, UTAH

Pursuant to the provisions of the "Utah Mined Land Reclamation Act" and to Rule M of the General Rules and Regulations concerning Mined Land Reclamation of the Division of Oil, Gas and Mining, the undersigned applicant, Geokinetics Inc., hereby gives notice of intention to commence process development operations and submits the following information in support thereof. At this time applicant intends only to conduct geologic exploration and in situ process development operations in the plan area. When applicant has completed plans for subsequent operations, supplementary information will be submitted.

1. Attached hereto, marked Exhibit A, and by this reference made a part hereof, is an executed copy of MRA Form 1, a map showing the location of the lands to be affected by the operation contemplated, and an accompanying text that sets forth the presently available information as requested in Rule M-3(1). As applicant's plans progress, the location and scope of facilities may be altered.

*Operation contemplated does not involve mining. Experimental work on an in situ extraction process is planned.

2. Attached hereto, marked Exhibit B, and by this reference made a part hereof, is an executed copy of MRA Form 2 that furnishes the available information requested in rule M-3(2) in regard to reclamation of the area to be affected by the proposed activities.

3. Attached hereto, marked Exhibit C, and by this reference made a part hereof, is a statement giving general details of the process development work proposed as requested in Rule M-3(3). We hereby request that the Division of Oil, Gas and Mining treat Exhibit C as proprietary information.

4. Operator affirmatively states it will notify the Division of Oil, Gas and Mining of the location and approximate depth of all exploratory holes and other holes more than 2½ inches in diameter and that it will plug said holes in such a manner as to prevent migration of water, oil, gas or other substance from one formation to another. Operator agrees to take, preserve and identify samples of all subsurface water found in measurable quantities and forward such samples to the Division for analysis.

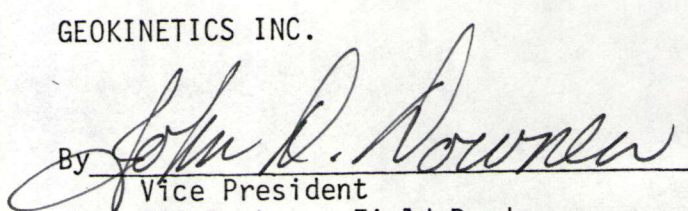
To the extent that subsequent activities, following this preliminary work, will significantly affect the environment, additional advance information and plans will be provided as required by the Board.

WHEREFORE, applicant respectfully prays that this notice of intention be given administrative approval by the Board.

Respectfully Submitted,

GEOKINETICS INC.

By


Vice President

288 Buchanan Field Road
Concord, California 94520

Date

19 May 1977

Date: 19 May 1977

EXHIBIT A
STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS *
(See Rule M of General Rules and Regulations)

1. Name of Applicant or Company Geokinetics Inc.
Corporation (☒) Partnership (☐) Individual (☐)
2. Address 288 Buchanan Field Road, Concord, California 94520
Permanent Temporary
Mitchell A. Lekas, President or
3. Name and title of person representing Company John D. Downen, Vice President
4. Address same Office Phone 415-689-4461
5. Location of Operation Uintah Sec. 2 T. 14S R. 22E
County
6. Name of Mine Utah Experimental Site #1
7. Mineral to be mined: Mining Method:
(☐) Coal (☐) Flagstone In Situ Retorting
(☐) Copper (☐) Gravel
(☐) Manganese (☒) Shale
(☐) Iron Ore (☐) Uranium
(☐) Phosphate (☐) Gilsonite
(☐) Potash (☐) Bituminous Sandstone
(☐) Fluorspar (☐) Tungsten
(☐) Other (Specify) _____
8. Have you or any Person, Partnership or Corporation associated with you received an approved Notice of Intention to Commence Mining Operations by the State of Utah for operations other than described herein?
(☐) Yes (☒) No

If yes, list all approval numbers now under surety:

9. Owner/Owners of record of the surface area within the land to be affected:
State of Utah Address _____
Address _____
Address _____

*Operation contemplated does not involve mining. Experimental work on an insitu extraction process is planned.

10. Owner/Owners of record of minerals to be mined:

Ron J. Hollberg, Jr. optioned to _____ Address 225 North State St. Salt Lake City, Utah 84103

Geokinetics Inc. _____ Address 288 Buchanan Field Road Concord, California 94520

_____ Address _____

_____ Address _____

11. Owner/Owners of record of all other minerals within any part of the land affected:

none _____ Address _____

_____ Address _____

_____ Address _____

_____ Address _____

- 11a. Have the above Owners been notified in writing?

(X) Yes

() No

12. Source of Operator's legal right to enter and conduct operations on land to be covered by the Notice
- State of Utah Oil Shale Lease #ML 24276

13. Approximate acreage to be disturbed:

Mining operation area (include operations, storage, and disposal area):

Operations 8 acres +

Access Road or Haulageway: Approx. 1 acres +

Drainage System: _____ acres =

Total Acres: 9 acres

14. Give the
- ~~names~~
- and post office addresses of every principal Executive, Officer, Partner, (or Person performing a similar function) of Applicant:

Name	Title	Address
a. Mitchell A. Lekas	President	288 Buchanan Field Road, Concord, Ca 94520
b. John D. Downen	Vice President	288 Buchanan Field Road, Concord, Ca 94520
c. Henry H. Patton	Treasurer	Orchard Road, Skillman, New Jersey 08558
d. Robert D. Mackenzie	Secretary	1 Maritime Plaza, San Francisco, Ca 94111

15. Has Applicant, any Subsidiary or Affiliate or any Person, Partnership, Association, Trust or Corporation controlled by or under common control with Applicant, or any Person required to be identified by Item 14, ever had an approval of a Notice of Intention withdrawn or has surety relating thereto ever been forfeited? Yes () No (X)

If yes, explain:

STATE OF Utah

COUNTY OF Uintah

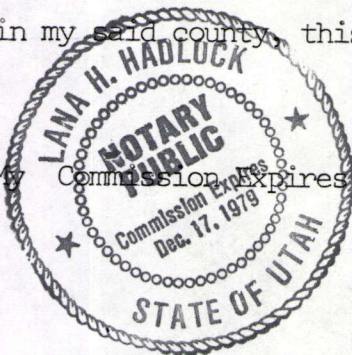
I, John D. Downen, having been duly sworn
depone and attest that all of the representations contained in the foregoing
application are true to the best of my knowledge; that I am authorized to
complete and file this application on behalf of the applicant and this
application has been executed as required by law.

Signed: John D. Downen

Taken, subscribed and sworn to before me the undersigned authority
in my said county, this 19th day of May, 19 77.

Notary Public: Lana Hadlock

My Commission Expires: 12/17/79



SUPPLEMENT TO EXHIBIT A
LANDS TO BE AFFECTED BY PROPOSED OPERATION

a. Land to be affected is in the NE $\frac{1}{4}$ of Section 2, T14S R22E and marked "Project Area", and total acreage currently planned to be affected is approximately 9 acres.

b. Within the "Project Area" there are no active or inactive underground or surface mined areas. The State of Utah owns the entire area. The oil shale mineral rights are owned by R. J. Hollberg under State of Utah Lease #ML24276 and optioned to Geokinetics Inc. Grazing rights from the State of Utah are owned by the Flying Diamond Ranch.

c. Scale of Map is 1" = 500'.

d. There are no lakes, rivers, reservoirs, streams, creeks, springs, or other bodies of public water, roads, buildings, abandoned or active surface facilities nor transmission lines on the land affected nor within 500 feet of the exterior limits of the land affected.

e. No overburden or topsoil will be removed and the natural drainage of the area will not be materially affected.

f. Two core holes are within the "Project Area". (See map for depths and locations.) No water bearing strata were encountered. Approximately 25 feet of oil shale was encountered. No toxic materials were encountered. Approximately 8" to 12" of topsoil was encountered.

g. Topsoil will remain in place as will overburden. No spoil will be produced.

h. Sanitary waste water will be handled in accordance with State health standards and regulations. Drilling will be conducted with compressed air and no water or drilling mud is expected to be needed.

Date: 19 May 1977

EXHIBIT B
STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

MINING AND RECLAMATION PLAN*

1. Name of Applicant or Company Geokinetics Inc.
2. Proposed type of operation In Situ Oil Shale Retorting
3. (a) Prior Land Use(s) Grazing
(b) Current Land Use(s) Grazing
(c) Possible or Potential Future Land Use(s) Grazing
4. What vegetation exists on the land proposed to be affected Sparse range
grass and scattered small bushes and trees.
(a) Percent Cover 70%
5. What is the average pH of soil before mining? _____ pH, What is the
average pH of soil of proposed disposal area? - pH no disposal area
Name of person or agency and method of determining pH _____
pH will be determined and Division of Oil, Gas & Mining notified at earliest
possible time.
6. Site elevation above sea level approximately 6700'
7. In case of coal, oil shale, and bituminous sandstone:
Principal seam(s) and thickness(es) Mahogany - Approximately 20'
8. Estimated duration of mining operations intermittent experimental work for
next 2 years or until Division of Oil, Gas & Mining is notified otherwise.
9. Has overburden and/or minerals mined or proposed to be mined been
classified as acid or alkali producing? () Yes (x) No
Does the material being moved have any characteristics affecting
revegetation? no
10. Will any underground workings be encountered? () Yes (x) No.
Is there an active discharge from abandoned deep mines on the proposed
area of operation? () Yes (x) No If yes, describe the quality
of water being discharged _____.
11. Describe specifically a detailed procedure for: (Attachments, drawings,
or supplements 8 1/2" x 11" sheets)
 - a. The mining sequence.
 - b. A procedure for constructing and maintaining access roads, to include
*Operation contemplated does not involve mining. Experimental work on an in situ
extraction process is planned.

- a typical cross-section and a profile of the proposed road grades.
- c. A procedure for site preparation to include removing and disposing of trees and brush.
 - d. A method for removing and stockpiling topsoil or disturbed materials.
 - e. A method for the placement of containment of all disturbed materials, to include the method for handling of all acid or alkali-producing and toxic material.
 - f. A procedure for final stabilization of disturbed materials.

GRADING

Specifically describe:

- a. Typical cross-section of regrading.
- b. The method of spreading topsoil or upper horizon material on the regraded area and indicate the approximate thickness of the final surfacing material.
- c. What type of soil treatment will be utilized.
- d. The method of drainage control for the final regraded area.
- e. Maximum grading slope.

TESTING

1. Describe method for testing soil pH will be tested and results forwarded to
Division of Oil, Gas and Mining as early as possible.
2. Describe treatment to neutralize or otherwise condition soil to support a vegetative cover. Soil will remain in place and should not need conditioning.
3. Describe preparation of areas intended to support revegetation -
Bench or terrace: As soil will not be moved it will simply be replanted in
original species, if original plants do not survive through the experimental
operation.
Outslope: Same as above.

REVEGETATION

1. Revegetation to be completed by:

(x) Operator	() Hydroseeding
() Soil Conservation District	() Aerial Seeding
() Private Contractor	() Conventional or Rangeland Drilling Method.
2. Mulch-
Type to be developed as part of Rate/Acre _____ lbs.
experimental program

3. Revegetation plan and schedule -

Species	Rate/ acre	Planting location	Facing N-S-E-W	Season to to be Replanted
to be developed based on results of proposed experimental work.				

4. Will affected area be subject to livestock or wildlife grazing: (x) yes ()
If yes, describe vegetation protection _____

_____ procedures will be developed as part of experimental program.

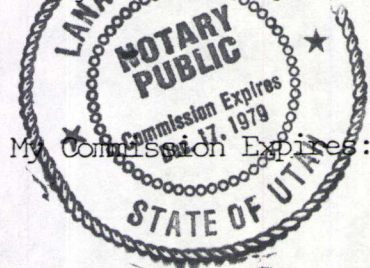
5. Will irrigation be used? () yes (x) no Type _____

6. Describe maintenance procedures for revegetation if needed, until security release is granted _____ Procedures will be developed as part of experimental program.

I, the undersigned operator, hereby submit this to be my reclamation and mining plan for the area shown on the attached map. I further understand that the operation will be conducted in accordance with the Mined Land Reclamation Act of 1975, and all rules and regulations currently in effect thereunder.

Signed John D. Rowner Operator, Date 19 May 1977

I, the undersigned, subscribed and sworn to before me the undersigned authority in my said county, this 19th day of May, 19 77.



Notary Public Lana Hadlock

My Commission Expires: 12/17/79



SUPPLEMENTAL SHEET TO MRA FORM 2

- 11.a. The commercial production sequence will be determined by the results of the process development work that is the subject of this Notice of Intention.
- b. Access road will be an unimproved dirt road that will not be graded, which will extend from the existing county road as shown on map in Exhibit A.
- c. Site preparation will consist of removing only such brush as directly interferes with drill setups. All other vegetation will remain in place.
- d. Topsoil will remain in place.
- e. No spoil will be produced and no acid or alkali-producing or toxic materials will be produced or used.
- f. The surface of experimental sites that may be disturbed will be revegetated, if necessary.